



Base package
conforms to JEDEC DO-9

Short Form Data Sheet

Part number: **1N4046R**

Features:

- ✓ All diffused silicone.
- ✓ Metal Ceramic package, conforms to JEDEC D0-9.
- ✓ Hermetic seal.
- ✓ Vibration resistant.

Applications:

- Welding
- Plating
- Power Supplies

Voltage

Parameter	Symbol	Rating	Units
Maximum Repetitive Reverse Voltage <small>Notes: 1, 3, 4, 5, 6</small>	V_{RRM}	1200 ~ 1800	Volts
Maximum non repetitive Surge of Reverse Voltage <small>Notes: 2, 3, 4, 5, 6</small>	V_{RSM}	$V_{RRM} + 100$	Volts
Maximum non repetitive Forward Voltage <small>Notes: 2</small>	$V_{FM} @ I_{FM}$	1.6 @ 1500	V @ A
<small>Note 1: T_J 25°C. Note 2: T_J 125°C. Note 3: Measured at the sine wave peak. Note 4: Below 0°C derate V_{RRM} 10%. Note 5: V_{RRM} has I_{RRM} of up to 30mA. Note 6: V_{RR} has typical I_{DR}, I_{RR} of 2-7mA. Note 7: For DC applications derate V_{RRM} 45%.</small>			

Amperage

Parameter	Symbol	Rating	Units
Maximum, Average Current <small>Notes: 3, 4</small>	$I_{F(AVE)}$	400	Amperes
Maximum, RMS Current <small>Notes: 3, 4</small>	$I_{F(RMS)}$	625	Amperes
Maximum non repetitive Surge Current with no reverse voltage reapplied. <small>Notes: 2, 4</small>	$I_{FSM} 0\% V_{RRM}$	6.9	kA
I_{RR} = Typical Repetitive, Reverse, Current. <small>Note: 1</small>	I_{RR}	3 ~ 7	mA
I_{RRM} = Maximum (threshold), Repetitive, Reverse, Current. <small>Note: 1</small>	I_{RRM}	30	mA
Fuse's absolute maximum $I^2 t$ with no reverse voltage reapplied <small>Note: 2, 4</small>	$I^2 t, 0\% V_{RR}$	22.5	kA
Reverse Recovery Charge (C_S = Stored Charge)	Q_{RR}	Consult factory	μC_S
<small>Note 1: T_J 25°C. Note 2: T_J 125°C. Note 3: T_{Case} 55°C air cooled. Note 4: 180° conduction, 60Hz sine wave.</small>			

Thermal, Mechanical & Weight

Parameter	Symbol	Rating	Units
Operating Temperature Range	T_J	-40° ~ 180°	°Celsius
Maximum Thermal resistance, Junction to Case <small>Notes: 1, 2</small>	R_{th-J-C}	0.11	°C/W
Maximum Thermal resistance, Case to Heat Sink <small>Notes: 1, 2, 3, 4, 5</small>	$R_{th-C-HS}$	0.1	°C/W
Mounting Torque (No Lubrication on Threads)		35	Nm
		310	lbf/in
Weight		198	Grams
		7	oz.
<small>Note 1: Recommended mounting torque applied Note 2: 180° conduction, 60Hz sine wave. Note 3: Case Temperature measured at hex section of base.</small>			